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Central Milk Programs in Southern Food Chains

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CENTRAL MILK PROGRAMS IN SOUTHERN FOOD CHAINS. Harold W. Lough and Richard F. Fallert. Commodity Economics Division, Economic Research Service, U.S. Department of Agriculture.

ABSTRACT

Results are reported of a survey of food chains in the southern region of the extent and characteristics of central milk programs, a type of vertical integration of food chain operations. Central milk programs were reported by 196 of the 330 food chain survey respondents of which 38 reported operating their own fluid milk processing plants. Other subjects discussed include private labeling, the distance milk is shipped, and reasons for central milk programs.

KEYWORDS: Fluid milk market, vertical integration, chain stores, centralization.

ABOUT THE AUTHORS

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SUMMARY

Central milk programs, a type of vertical integration of food chains, were reported by 196 of the 330 respondents to a survey of food chains in the southern region. The food chains with central milk programs were associated with approximately 20,000 retail stores. Seventy-seven percent of these stores were supplied milk on a centralized basis and 23 percent arranged for their own needs.

The rate of implementation of central milk programs appears to be accelerating; 32 percent of the present central programs in the southern region were initiated between 1971 and 1975.

The chains cited lower cost of milk and uniform merchandising as the most important reasons for having central milk programs. Less important was providing stores with a more uniform product, and least important reasons were reducing administrative expense or facilitating the procurement of private label milk.

Fluid milk brands were separated into private label milk, packaged under a brand name owned by the distributor, and processor brand milk, packaged under a manufacturer's brand. Private label milk was sold by 60 percent of those chains under central milk programs. Twenty-two percent of the chains carried a single private label brand only.

The processed milk was transported an average of 54 miles from the processing plants to the stores. Private label milk was transported farther (69 miles) than processor brand milk (43 miles).

CENTRAL MILK PROGRAMS IN SOUTHERN FOOD CHAINS

Harold W. Lough and Richard F. Fallert

INTRODUCTION

Vertical integration by food chains of the fluid milk marketing channel represents one of the most important recent changes in milk processing and distribution. Vertical integration occurs when a firm assumes and combines production and marketing functions in the market channel sequence. Food chain vertical integration of the milk marketing channel may range from instore private labeling of milk to chain ownership of fluid milk processing plants.

Centralized milk procurement programs represent one type of vertical integration by food chains. These can have any of the following features: operating a milk processing plant, contracting for milk or milk products on a regional or divisional basis, or centralized buying and merchandising of processor or private label brands. Private brand milk is packaged under a brand name owned by the distributor and processor brand milk is packaged under a manufacturer's brand. Although private labeling is not necessarily associated with all central milk programs, the presence of these programs often facilitates the use of private labels as well as restricting the number of processor brands stocked and counter space devoted to them.

This study of southern region food chains examines the degree of central milk programs in the South and relates the results to previous studies. The focus is on the extent of these programs, their characteristics, and the role of private labeling.

The trend in vertical integration was referred to by Parker in 1973: "(This)...has been the single most important new trend to develop in the fluid milk industry during the last decade" (10, p. 95). 1/ This observation was supported by Manchester in 1974: "The most significant change in market structure has been the growth of integrated supermarket firms" (4, p. 32).

BACKGROUND

Food chains provide only one of many outlets in the rapidly changing pattern of fluid milk distribution. Supermarket sales of fluid milk account for about one-third of total volume. However, they are often the pacesetter in markets in determining prices, margins, and merchandising policies. Home delivery of milk dropped from 54 percent of total milk sales in 1954 to 9 percent in 1976 (7 and unpublished data).

1/ Underscored numbers in parentheses refer to Literature Cited at the end of this report.

Trends in Fluid Milk Distribution

Many factors in fluid milk production and distribution, in addition to the types of distributors, are interrelated with the recent increases in vertical integration of food chains. Some of these are expanding distribution areas of fluid milk processing plants, economies of scale in fluid milk processing, State milk pricing regulations, and increases in food chain market power:

Expanding Distribution Areas

Thirty years ago, few fluid milk bottling plants distributed milk more than 30 or 40 miles from the plant. The distribution area has expanded considerably. A recent survey of 56 markets revealed that 23 percent of the milk came from processors 50 to 149 miles from the stores and 9.5 percent from 150 to 249 miles. Private label milk packaged in integrated plants accounted for nearly 87 percent of the milk transported over 100 miles in this study and for all of the milk which moved more than 200 miles (3, p. 4).

This expanding distance results from technological changes in transportation, refrigeration, packaging, and highways. Also important are changes in sanitary and other regulations. Court decisions have struck down many local sanitary regulations once restricting the flow of milk. Too, many States and localities have adopted standard regulations. In addition, once fairly widespread licensing restrictions on the number of plants or the geographic area in which a plant is permitted to serve have been relaxed.

Economies of Scale

The cost of processing fluid milk in large plants is lower than it is in small plants. One summary of economies of scale reported a cost per quart of 6.7 cents for a plant processing 6,000 quarts per day compared with 2.4 cents for a plant with a capacity of 800,000 quarts per day (6, p. 10).

Pricing Regulations

Resale prices, regulated at one or both the retail and wholesale levels by 15 States (App. 1), can favor food chains if they are operating efficiently. Such regulations set prices at a minimum, maximum, or both (11). In setting resale prices, States usually base processing margins on the average costs of a number of processors. As a result, the more efficient plants experience cost levels lower than the regulated margins while costs of less efficient plants are higher.

Market Power

Food chains have increased their market power in the fluid milk market channel due to their size (App. 2), special market access, and increased product control. Chains have increased in store size, number of stores, and

area covered; they commonly cover several marketing areas. In addition, they control final market access through captive retail outlets where processors once had direct consumer contact through home deliveries.

The ability of fluid milk processors to reach the consumer market depends on the mix of brands sold in stores. One survey revealed that supermarkets selling only private label whole milk represented 17.1 percent of all stores surveyed and 32.7 percent of total sales. Almost 83 percent of the milk sold in these stores was from store-owned plants. Supermarkets selling both store and processor brand milk accounted for 43.4 percent of total sales while supermarkets handling processor brands only accounted for 23.9 percent of total sales. The survey reported an average of 2.4 brands of whole milk per store (3, pp. 6-8).

Extent of Vertical Integration

Food chains operating fluid milk processing plants, according to Parker, have been increasing nationwide in recent years. "In 1958, seven of the 40 largest corporate food chains and two of the 30 largest voluntary and cooperative food chains were vertically integrated into fluid milk processing By 1971, a total of 19 of the 40 largest corporate chains and five of the largest voluntary or cooperative food chains and 21 other large and medium-sized food chains were integrated into fluid milk processing Their production was almost 21 percent of the total fluid milk sold through food stores," Parker wrote (10, pp. 100-103). In 1970-71, eight of the top 25 processors of fluid milk based on volume were food chains (10, p. 105).

Manchester identified 26 food companies nationwide operating 51 plants and accounting for 8.5 percent of sales of commercial processors with at least an additional five other food companies operating milk plants as well. Integrated supermarket plants accounted for about 8.8 percent of sales in the Southeast (4, pp. 6-8).

Finally, the broad extent of vertical integration in fluid milk distribution is verified in a recent study which found that sales of fluid milk by vertically integrated handlers accounted for 13.6 percent of total fluid sales of regulated handlers in 61 Federal order markets (8). Vertical integration in that study represented both handlers integrating forward into retail sales and food chains integrating backward into processing. However, the latter accounted for 68 percent of all milk processed by integrated firms.

Other forms of vertical integration involve central milk programs, which may or may not include plant ownership by food chains. A study of 451 Midwest food chains in 1968-69 reported 13 chains (3 percent) had processing plants. Of the remaining 438 chains, 245 (54 percent) had some form of central milk purchasing program. A higher proportion of corporate chains (84 percent) than of voluntary and cooperative groups (42 percent) had some type of central milk program without plants (2, p. 5). While corporate chains include retail food stores under common ownership, voluntary chains include wholesaler sponsored retail stores served and advertised under a common name. Cooperative chains are members of wholesale buying groups.

Reasons for Vertical Integration

The decline in retail home delivery of fluid milk has forced many surviving fluid milk processors to compete for the business of retail food stores. This, combined with a high concentration of food chains in local markets, the uniform nature of fluid milk, and the excess production capacity of fluid milk processors, has made milk prices the dominant marketing factor encouraging vertical integration by food chains.

The increased distance which packaged milk can be transported, combined with the frequent location of a chain's stores in different marketing areas, provides another incentive for vertical integration. The feasibility of moving milk greater distances allows a chain to operate a plant in a central location to supply all stores; problems of having to rely on different local processors for each area are avoided. This trend was verified by Jones when he reported that private label milk was often transported longer distances from plant to store when compared to processor brand milk (3). Larger distribution areas also allow fuller utilization of economies of scale by a plant which can supply all stores in the chain's captive market.

Some incentive for vertical integration appears to be provided by the existence of fixed margins under resale price control in some States. There is a tendency in these States to avoid provisions which permit such marketing changes as volume or limited service discounts (9, p. 69). This tendency is supported by a more recent study which concluded that the competitive process was more effective in maintaining low marketing margins and in encouraging innovativeness than was the State regulatory process which set minimum and/or maximum prices (12, p. 28). Thus, when prices tend to be set at the level of average or higher costs, there may be some incentive by food chains to integrate to capture available profits.

Increased vertical integration in States with resale laws was verified by Jones. His study showed that 32.2 percent of the supermarkets packaged all or part of their private label milk in these States versus 24.3 percent in the other States. Jones concluded, "Apparently, in States where prices are fixed administratively, supermarkets have greater economic incentive to integrate backward into milk processing, whereas in uncontrolled markets, stores have greater freedom to promote the sale of milk through price competition" (3, p. 5).

Market power gains in the fluid milk distribution channel by food chains have improved their bargaining position with processors and may have encouraged vertical integration. When home delivery was the prevalent method of distribution, fluid milk processors would directly supply hundreds or thousands of individual customers, but they may now supply only a few chain accounts. As a result, the survival of the processor may depend on gaining or losing one of a few major accounts in a market areas.

Changing food chain policies on product assortment have limited the customer shelf space available to independent processors. "Since the typical merchandising policy before the introduction of private labels was to sell three to six of the major brands available in the area, the shift to private label and perhaps one other brand usually means that the processors of the

remaining brands lose a major outlet when the supermarket group makes the shift in merchandising policy," Manchester concludes (4, p. 15). "Thus, the introduction of private label milk gives a retail organization substantial bargaining power in dealing with its supplier."

The above discussion of factors facilitating vertical integration by food chains into fluid milk processing and distribution does not include many reasons mentioned in other studies. Details on additional factors can be found in Parker (10, pp. 106-112) and Manchester (9, pp. 99-100).

DESCRIPTION OF THE SURVEY

Food chains in the southern region 2/ were surveyed in the fall of 1975. The primary objectives were to obtain information on:

- (1) The extent to which food chains process their own milk.
- (2) The extent to which food chains have initiated central milk buying and merchandising programs.
- (3) The major reasons for having central milk programs and the forces encouraging vertical integration by food chains.

A food chain was specified in this study as a food wholesaler or a company operating ten or more retail food stores and/or four or more retail supermarkets. 3/ The chains were divided into two types for comparison: (1) corporate chains and (2) voluntary and cooperative chains.

The questionnaire was directed to the decisionmaking units of the chains. These decisionmaking units refer to the central buying or negotiating points of food chains. They are usually at the home office of small chains and at the division offices of the larger national or regional firms. However, where there were several divisions in a chain, but milk procurement was arranged at one location, the divisions were combined and one report was used.

Chain headquarters were considered the decisionmaking units in the food chains because previous studies showed that the decisionmaking autonomy of individual store managers has been declining. For example, a study in the Midwest found: ".... processors are increasingly negotiating terms of trade with the central offices of corporate chains and voluntary and cooperative group wholesalers rather than with managers of individual supermarkets and smaller stores" (2, p. 1).

2/ The southern region includes Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia.

3/ A supermarket is defined as a retail food store with sales of \$20,000 or more per week.

Since this survey obtained responses from the decisionmaking unit of a chain, care must be taken in understanding the definition of the term food chain as it was used in this study. In many cases, there were survey responses by several regional divisions of the same food chain in name. Each of these was treated as a separate food chain. Also, since the definition of decisionmaking unit is somewhat arbitrary and might be interpreted differently by different chains, the size of food chains, as measured by the number of stores, was not often used to explain central milk program characteristics.

Mail questionnaires were used in the initial and followup stages of the survey. Telephone followups were used for data clarification and to obtain information from the mail survey nonrespondents.

Secondary sources of information indicated that the headquarters of 558 food chains of the minimum specified size were located in the southern region. The initial survey covered these 558 chains (table 1). The results of the mailed questionnaires and the telephone followups isolated 29 cases where there were food chain division duplicates in decisionmaking. Of the remaining 529 food chains, 111 did not carry fluid milk. These were all voluntary and cooperative group chains.^{4/} The final list contained 418 food chains surveyed which handled fluid milk of which there were 330 respondents (79 percent). The results in this report are based on information from these 330 respondents.

EXTENT OF CENTRAL MILK PROGRAMS

Sixty percent of the respondents had central milk programs (table 2). Voluntary and cooperative chains had a greater proportion of central milk programs than corporate chains. Of those food chains reporting central milk programs, 19 percent reported operating their own fluid milk plants; these include many instances of regional divisions of the same food chain. There are 25 reported chain-owned fluid milk processing plants in the southern region, with four additional plants located outside the region but distributing within it (13). These plants were reported as being owned by eight different food chains in name.

The midwestern study on central milk programs reported 57 percent of the respondents with some type of central milk program (2, p. 5). However, the proportion of central programs by chain type was different from the southern study. Seventy percent of the corporate chains and 42 percent of the voluntary and cooperative chains reported programs.

Although the State location of the decisionmaking units was reported in the survey (App. 3), the State location of the stores in the chains was not determined in this study.

The 196 food chains in the survey with central milk programs operated or had associated with them approximately 20,000 retail stores of which about 31

^{4/} The firms not carrying fluid milk were primarily dry grocery wholesalers.

Table 1--Classification and survey response of southern food chains, 1975

Chain classification	Corporate chains		Voluntary and cooperative chains		Total	
	Number	Percent	Number	Percent	Number	Percent
Total	370	--	138	--	558	--
Division duplicates	28	--	1	--	29	--
Subtotal	342	--	187	--	529	--
Do not handle fluid milk	0	--	111	--	111	--
Handle fluid milk	342	100	76	100	418	100
Nonresponse	71	20	17	22	86	21
Response	271	80	59	78	330	79

Table 2--Extent and characteristics of central milk programs of southern food chains, 1975

Type of milk program	Corporate chains		Voluntary and cooperative chains		Total	
	Number	Percent	Number	Percent	Number	Percent
Central milk program, without plants	122	45	36	61	158	48
Central milk programs, with plants	35	13	3	5	38	12
No central milk program	114	42	20	34	134	40
Total	271	100	59	100	330	100

percent were supermarkets. But supplies for all these stores are not all arranged through the central programs (table 3). However, in contrast to voluntary and cooperative chains, corporate chains centrally supplied milk to almost all of their stores (table 3).

In comparison, the midwestern study reported 70 percent of all stores supplied on a centralized basis, including 92 percent of the corporate chain stores and 62 percent of the voluntary and cooperative chain stores.

Different types of food chains with central milk programs (including both with and without plants) did not vary markedly in size as measured by the number of stores (table 4). About 58 percent of the chains under central milk programs had fewer than 30 stores.

The bulk of the chains with fluid milk processing plants tended to have a large number of stores (table 4). This supports the idea that substantial fluid milk sales by a food chain are needed to warrant operating its own plant.

CHARACTERISTICS OF CENTRAL MILK PROGRAMS

Labeling

One form of vertical integration in fluid milk processing and distribution considered in this study was private labeling by the chains. Beck and Alvis found that private label brands tend to stimulate direct price competition in contrast to the more traditional role of processor brands in nonprice forms of competition such as brand advertising (1, p. 746).

The study of Midwest chains revealed 70 percent of the chains, that had central milk programs but no plants, used private labels (2, p. 15). That study also revealed an increase in private label usage with over three-fourths of the chains with private labels initiating these brands from 1960 through 1968 (2, p. 19).

The survey of the southern region reported a lower private label usage. Although 22 percent of the chains reported carrying a private label brand of milk only (table 9), 117 chains, or 60 percent, merchandised at least some milk under their own private label. There were 80 corporate chains (51 percent) and 30 voluntary and cooperative chains (77 percent) selling milk under private label.

Further breakdown of the survey responses revealed that over 50 percent of the milk sold was private label in 64 percent of those chains which carried private label milk (table 5). Almost 50 percent of those chains carrying private label milk in the southern region reported initiating these programs from 1970 through 1975 (table 6).

In addition to private label brands of milk carried, food chains often carried more than one processor brand of milk. There were 187 food chains--152 corporate and 35 voluntary and cooperative--which reported the number of processor brands carried. Almost 90 percent carried either one, two, or three

Table 3--Participation of stores associated with southern region food chains in central milk programs, by type of store and firm, 1975

Category	Corporate chains			Voluntary and cooperative chains			All chains		
	Super 1/	Other :	All	Super :	Other :	All	Super :	Other :	All
	<u>Number</u>								
Stores supplied milk on a centralized basis	4,395	7,881	12,276	1,160	2,029	3,189	5,555	9,910	15,465
Stores not supplied milk on a centralized basis	188	84	272	563	3,569	4,132	751	3,841	4,592
Total	4,583	7,915	12,548	1,723	5,598	7,321	6,306	13,751	20,057
	<u>Percent</u>								
Stores supplied milk on a centralized basis	96	98	67	36	43	88	72	77	77
Stores not supplied milk on a centralized basis	4	1	2	33	64	57	12	28	23
Total	100	100	100	100	100	100	100	100	100

1/ A supermarket is defined as a retail food store with sales of \$20,000 or more per week.

Table 4--Size distribution by number of stores of 330 food chains under central milk programs in the southern region, 1975 1/

Number of stores 2/	Food chains with central milk programs			Food chains with fluid milk processing plants		
	Corporate chains	Voluntary and cooperative chains		Total chains	Number	Percent
		Number	Percent			
4-5	22	14.0	2	5.1	24	12.2
6-9	36	22.9	3	7.7	39	19.9
10-19	17	10.8	8	20.5	25	12.8
20-29	19	12.1	6	15.4	25	12.8
30-49	22	14.0	4	10.3	26	13.3
50-69	13	8.3	6	15.4	19	9.7
70-99	7	4.5	4	10.3	11	5.6
100 or more	21	13.4	6	15.4	27	13.8
Total	157	100.0	39	100.0	196	100.0

1/ Chains that had 4 or more grocery stores.

2/ Store numbers were converted to supermarket equivalents (1 supermarket or 2 other stores).

Table 5--Fluid milk sold under private label by southern food chains in central milk programs, 1975

Percent of private label	: Voluntary : Corporate and All chains			: Voluntary : Corporate and All chains		
	chains	cooperative	chains	chains	cooperative	chains
----- Number -----						
1-10	1	1	2	1	3	2
11-20	2	1	3	3	3	3
21-30	7	1	8	9	3	8
31-40	5	5	10	7	17	10
41-50	9	4	13	12	13	12
51-60	11	5	14	15	17	13
61-70	5	1	6	7	3	6
71-80	15	4	19	20	13	18
81-90	7	0	7	9	0	7
91-100	13	8	21	17	27	20
Total	75	30	105	100	100	100
----- Percent -----						

Table 6--Private label brand introduction in southern food chains, by year

Year	: Voluntary : Corporate and All chains			: Voluntary : Corporate and All chains		
	chains	cooperative	chains	chains	cooperative	chains
----- Number -----						
Prior to 1960	4	0	4	5	0	4
1960-1964	16	1	17	21	3	16
1965-69	26	8	34	34	27	31
1970	8	2	10	10	7	9
1971	5	4	9	6	14	8
1972	6	4	9	8	14	8
1973	3	2	5	4	7	5
1974	4	3	7	5	10	7
1975	6	5	11	8	17	10
Total	78	29	107	100	100	100
----- Percent -----						

brands for an overall average of 1.9 processor brands (table 7). Based on limited observations, the voluntary and cooperative chains carried an average of slightly more processor brands than the corporate chains.

One unexpected result was that those chains with a private label also carried an average of more processor brands (2.0 brands) than those chains without a private label (1.7 brands). This may be partially due to the practice of the chain providing shelf space for the brand of the major processor bottling private label milk, in addition to other selected local processor brands, which would exert upward pressure on the number of brands in the stores. Larger chains seemed to be more likely to have private label milk and also to have more processor brands.

Rate of Implementation

There were 158 food chains with central milk programs reporting the date the programs were initiated. The data in table 8 indicate an accelerating trend toward central milk programs in the southern region. For example, in the 5 years between 1971 and 1975 alone, 32 percent of the programs were initiated.

Degree of Control

This trend toward central milk programs appears to permit the exercise of more market control by the chains in merchandising practices. A large proportion of the stores associated with food chains under central milk programs were directly supplied by these programs (table 9).

As indicated by table 9, corporate chains exercised a greater degree of control over selling price, brand selection, counter displays, and advertising and promotion than did voluntary and cooperative chains. Relatively few of the chains stocked only private label brands of milk; thus the control over retailing did not often extend to restricting the number of brands.

Reasons for Implementation

The respondents indicated the degree of importance of a prespecified set of reasons for having central milk programs (table 10). Lower cost and uniform merchandising were the most prominent reasons cited for having central milk programs.

The chains under central milk programs without processing plants were also asked if they had ever considered building a processing plant. The responses contained 142 who had not considered it and 12 who had. The reason given the most often for not having a plant was "insufficient volume." Two chains reported they had owned a plant at one time and were considering it again. One reported a plant currently under construction.

Table 7 - Number of processor brands carried by southern food chains with central milk programs, 1975

Number of processor brands	Chains with private label			Chains without private label			All chains		
	Corporate	Voluntary	Subtotal	Corporate	Voluntary	Subtotal	Corporate	Voluntary	Total
5	1	---	---	---	---	---	1	---	1
4	5	5	10	3	8	11	8	24	38
3	16	14	30	8	4	12	4	14	38
2	41	12	53	21	4	25	62	16	78
1	11	3	14	34	1	35	45	4	49
0	12	1	13	---	---	---	12	1	15
Total	86	30	116	66	5	71	152	35	187
Average	1.9	2.3	2.0	1.7	1.8	1.7	1.8	2.1	1.9
							Percent		
5	1	---	1	---	---	---	1	---	1
4	6	4	5	5	4	4	5	4	4
3	19	47	26	12	---	11	16	40	20
2	48	40	46	32	80	35	41	46	42
1	13	10	12	52	20	51	30	11	26
0	14	3	11	---	---	---	8	5	7
Total	100	100	100	100	100	100	100	100	100

Table 8--Food chains in survey initiating central milk program, by year and type of chain

Year	Corporate chains	Voluntary and cooperative chains	All chains	Corporate chains	Voluntary and cooperative chains	All chains
	Number			Percent		
Prior to 1950	7	0	7	6	0	4
1950-55	3	1	4	2	3	3
1956-60	15	0	15	12	0	9
1961-65	30	4	34	24	12	22
1966-70	37	11	48	30	32	30
1971	6	5	11	5	15	7
1972	4	3	7	3	9	4
1973	8	1	9	6	3	6
1974	4	5	9	3	15	6
1975	10	4	14	9	12	9
Total	124	34	158	100	100	100

Table 9--Characteristics of central milk programs of southern food chains, 1975

Characteristics	Corporate chains	Voluntary and cooperative chains	All chains
	Percent		
Control over participation:			
Chain stores served by central milk programs	98	43	77
Control over merchandising:			
Chain determined store selling price	90	31	79
Chain determined brands stocked	91	40	81
Chain regulated counter displays	84	43	76
Chain controlled advertising and promotion	87	71	84
Chains with private label brands only	18	34 1/	22

1/ This probably indicates that only private label brands were merchandised under the central milk program.

Table 10--Reasons cited by southern food chains for having a central milk program, 1975

Reasons	Importance of decision to put milk on a centralized basis						Percent Total	
	Very important		Somewhat important		Not at all important			
	Number	Percent	Number	Percent	Number	Percent		
To obtain at lower costs	134	77	33	19	6	3	173	
To provide a more uniform merchandising policy	133	76	31	18	11	6	175	
To provide stores with more uniform products	102	59	54	31	18	10	174	
To reduce accounting and administrative expense	71	41	66	38	36	21	173	
To facilitate obtaining private label milk	71	42	43	25	57	33	171	
							100	

A Midwest study reported the principal reason for central programs as lower cost, although these costs were not specified (2, p. 13). Other reasons emphasized by respondents in that study were economics of dealing with fewer suppliers, a more uniform product, and the attainment of a more uniform merchandising policy.

Delivery Destinations and Distances

Under central milk programs, milk is delivered directly to stores by the processors in most cases (table 11). A few food chains reported more than one method of milk delivery. Of the 38 food chains operating fluid milk plants, only two reported delivery to a warehouse by the plant.

There were 152 chains, 117 corporate and 35 voluntary and cooperative, which estimated the average distance from processing plant to store. Of the total, 75 reported for both private label and processor brands, 23 reported for just private label brands and 54 reported just for processor brands. This was the most difficult section of the survey for the respondents since there were, in many cases, hundreds of stores in the chain. Corporate chains reported less distance compared to the voluntary and cooperative chains while private label milk was transported farther than processor label milk (table 12).

These results seem to indicate milk is moved a greater distance from plant to store than Jones found although that study did not report average distances but rather the proportion of observation falling into prespecified mileage intervals. The results support previous information on the greater distance traveled by private label milk compared to processor brand milk (3, p. 4).

Private label milk for chains in this study with fluid milk processing plants was reported to move over twice as far from plant to store as processor brand milk (table 12). This was primarily due to a few very large regional chains with plants reporting average distances of up to 200 miles for their private label milk.

Problems

The major problem facing fluid milk merchandisers as viewed by respondents to the southern survey were prices too high to retailers which resulted in low profits. Eighty-seven decisionmakers listed this as a problem and often attributed this to State milk control boards. Also, 20 respondents listed too much government control as a separate problem. Other problems listed were special prices and/or deals to larger chains (15), handling and merchandising—including rotation (14), price fluctuation (6), generally bad service from producers and/or wholesalers (5), staying competitive with different government jurisdictions (4), and bad packaging and leakage (4).

Table 11--Milk delivery to stores under central milk programs of southern food chains, 1975

Milk delivery	: Voluntary : Corporate and cooperative chains			: Voluntary : Corporate and cooperative chains		
	: All chains :			: All chains :		
	<u>Number</u>			<u>Percent</u>		
Picked up at processor plant by chain	20	5	25	14	12	13
Delivered to central warehouse by processor	9	1	10	6	2	5
Delivered directly to stores by processor	118	36	154	80	86	81
Total	147	42	189	100	100	100

Table 12--Estimated distance between processing plants and store outlets for southern food chains under central milk programs, 1975

Brand	Corporate chains	Voluntary and cooperative chains	All chains	Chains with
				fluid milk
<u>Miles</u>				
Private	69	69	69	90
Processor	38	61	43	38
All brands	51	65	54	70

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Appendix 1--Resale pricing practices of State milk control agencies, 1976

State	Set minimum resale prices		Maximum allowable wholesale discount	Price differentials		
	Wholesale	Retail		Home delivery over store	Paper and plastic over tic over glass	Quantity discounts on home delivery
Percent						
Alabama	1/ x	1/ x	11	-	-	-
California	2/ x	3/ x	25	x	x	x
Maine	x	x	0	-	-	-
Massachusetts	4/ -	4/ -	-	-	-	-
Montana	x	x	0	-	-	-
Nevada	4/ -	x	0	x	x	-
New Jersey	4/ -	4/ x	6/ -	-	5/ -	-
North Carolina	4/ 7/ -	4/ 7/ -	14	-	-	-
North Dakota	7/ x	7/ x	25	x	x	x
Pennsylvania	x	x	14	-	-	-
South Carolina	x	4/ -	8	x	x	-
South Dakota	x	x	0	-	-	-
Vermont	1/ x	1/ x	9/ 13	-	-	x
Virginia	x	x	0	-	-	-
Wyoming	1/ -	1/ -	0	x	-	-
Puerto Rico						

x = yes; - = no

1/ State sets maximum prices.

2/ Wholesale pricing is suspended in all major marketing areas.

3/ Retail pricing is suspended in one zone of one marketing area.

4/ Pricing authority is not used.

5/ There is a price differential for plastic over paper.

6/ The discount may not result in the price being below cost.

7/ The State has authority to set maximum prices.

8/ The State has authority to set minimum retail prices only in the event of price disruption.

9/ Dock-21 percent.

Source: (11)

Appendix 2--Sales of food stores, U.S., 1974-75

Store type	1974	1975
<u>Million dollars</u>		
Chain and combination	61,240	66,750
Independent <u>1/</u>	64,275	70,300
Convenience	5,320	6,200
Specialty	7,925	8,650
Total	138,760	151,900
:		

1/ Firms with fewer than 11 stores.

SOURCE: 43rd Annual Report of the Grocery Industry, Progressive Grocer, New York, Ap. 1976.

Appendix 3--Extent of central milk programs in southern food chains, 1975

State	Central milk program		No central milk program		Total	
	Number	Percent	Number	Percent	Number	Percent
Alabama	15	7.7	11	8.2	26	7.9
Arkansas	7	3.6	3	2.2	10	3.0
Florida	20	10.2	15	11.2	35	10.6
Georgia	15	7.7	11	8.2	26	7.9
Kentucky	18	9.2	2	1.5	20	6.1
Louisiana	7	3.6	8	6.0	15	4.6
Mississippi	5	2.6	7	5.2	12	3.6
North Carolina	18	9.2	19	14.2	37	11.2
South Carolina	4	2.0	11	8.2	15	4.6
Tennessee	19	9.7	14	10.5	33	10.0
Texas	47	24.0	27	20.2	74	22.4
Virginia	21	10.7	6	4.5	27	8.2
Total	196	100.0	134	100.0	330	100.0

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